BANGALORE ELECTRICITY SUPPLY COMPANY LIMITED

(Wholly Owned by Government of Karnataka)

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No: BESCOM/GM(DAS/AGM-18/BC-19/
25-26/1770

O/o The General Manager(DAS)
BICC-1, 2nd Sector, 24th Main,
17th Cross, HSR Layout,
Bengalure-560102.
Date: 23.03.2026

Amendment to Technical specification of SPB

SUB: Expansion of Distribution Automation System to Peri-urban areas of Bengaluru city, District headquarters & Industrial areas across BESCOM jurisdiction.

REF: BESCOM/2025-26/OW/WORK_INDENT997 Dated: 13.02.2026.

Consequent to pre bid queries, in view of Expansion of Distribution Automation System to Peri-urban areas of Bengaluru city, District headquarters & Industrial areas across BESCOM jurisdiction, the following Amendments are issued.

Sl.No	Clause No	As per Tender Document	To be read as
1	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 3.3 Design Details (Page No.17)	Minimum gap between bushing to bushings inside all the cable compartments for proper cable termination will be finalized during design stage.	Minimum gap between bushing to bushing inside all the cable compartments for proper cable termination shall be 130mm
2	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 4.2 Voltage transformer (Page No.21)	Three numbers of potential transformers shall be provided. The burden per transformer shall be no more than 50 VA and the voltage ratio shall be 11kV/√3/110V/√3. The accuracy class shall be 0.5. HRC fuses shall be provided on the HV side.	Three numbers of potential transformers shall be provided. The burden per transformer shall be no more than 50 VA and the voltage ratio shall be 11kV/√3/110V/√3. The accuracy class shall be 0.2. HRC fuses shall be provided on the HV side.
3	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 6	The batteries shall be of Lithium Iron Phosphate (LiFePO4) type and shall have a minimum life of five (10) years at 25°C.	The batteries shall be of Lithium Iron Phosphate (LiFePO4) type and shall have a minimum life of Ten (10) years at 25°C.

	Power supply (Page No.24)		
4	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 10.2 Control Cabinet (Page No.32)	The Control Cabinet shall include a weather-sealed hole with a double compression cable gland, approximately 30 mm in diameter, on the top of the cabinet for routing an antenna cable that will be supplied and installed by BESCOM.	The Control Cabinet shall provide sealed box at an height of 40 inches from the base of the SPB and 5 inches from the front side of the SPB for routing an antenna cable. The sealed box shall include 2 numbers of weather-sealed hole with a double compression PVC cable gland, approximately 25 mm in diameter.
5	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 2.1.2 Life Span (Page No.8)	Each SPB shall have a design life of at least 20 years from the date of final acceptance commission.	Each SPB shall have a design life of at least 20 years from the date of commission.
6	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 3.2 Parameter Requirement Table 3-2: Circuit Breaker Parameters (Page No.15)	Rated Short Time Withstand/Making: 50 kA (rms)	Rated Short Time Withstand/Making: 52.5 kAp
7	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 10.2 Control Cabinet (Page No.32)	Provision for handle and padlock.	Shall provide handle and Number lock/Digital lock
8	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 3.3 Design Details (Page No.16)	The degree of protection required against prevailing environmental conditions, including splashing water and dust, shall be not less than IP 67 or better as per latest IEC standards.	The degree of protection required for SF6 Gas insulated chamber against prevailing environmental conditions, including splashing water and dust, shall be not less than IP 67 or better as per latest IEC standards.

9	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 5 Protection relay (Page No.21)	The SPB shall be equipped with SCADA based numerical relays as used to trip the circuit breaker.	The SPB shall be equipped with SCADA based Self powered draw out type numerical relays as used to trip the circuit breaker.
10	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 7.2 Specification Table : 7-1 (Page No.25)	Operating Measuring ranges: Current : 5 to 120% of rated value	Operating Measuring ranges: Current : 1% to 120% of rated value
11	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 2.7.4 Terminal Blocks (Page No.12)	Terminal blocks shall comply with latest IEC standards.	Terminal blocks shall comply with IEC 60947-7-1 standards.
12	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 3.2 Parameter Requirements Table 3-2: Circuit Breaker Parameters (Page No.15)	-	AFLR for SPB SF6 Tank & Cable chamber - IAC AFLR 21 kA for 1 sec.
13	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 3.5 Protection Relay 3.5.1 General (Page No.21)	The Circuit Breaker enclosures in the SPB shall be outfitted with a communicable type numerical (feeder protection) relay. The protection relay's auxiliary contacts shall be hardwired to the FRTU. The relay shall also interface with the FRTU via an RS 485 port in order to send, as a minimum, real-time phase current readings using the	The Circuit Breaker enclosures in the SPB shall be outfitted with a communicable-type numerical self-powered draw out type relay, i.e., for outgoing circuit breaker. The relay shall interface with the RTU via an RS485 port in order to send, receive or configure parameters, to provide status and control the relay reset in real time and shall have the capability of time synchronization from RTU using the Standard MODBUS

		MODBUS protocol.	protocol address defined by BESCOM.
14	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 10.2 Control Cabinet (Page No.32)	The Control Cabinet shall be similar in style and finish as the other SPB enclosures. This shall include having a minimum protection class of IP 56 or better.	The Control Cabinet shall be similar in style and finish as the other SPB enclosures. This shall include having a minimum protection class of IP 56 or better and can withstand external mechanical shocks not less than IK10 as per IEC 62262 standards.
15	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 1.1 Key SPB Components (Page No.4)	Capacitor voltage dividers serving live-line cable indicators with minimum one contacts for SCAD monitoring.	Capacitor voltage dividers serving live-line cable indicators with minimum one contacts for SCADA monitoring.
16	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 1.1 Key SPB Components (Page No.4)	SPB shall have 2 enclosures; one for each of the circuit breakers and one for auxiliary power supply unit and the necessary SCADA monitoring and control equipment. The SCADA monitoring and control equipment includes the FRTU and communication accessories.	SPB shall have 2 or 3 enclosures; one for the circuit breaker and one for auxiliary power supply unit and the necessary SCADA monitoring and control equipment. The SCADA monitoring and control equipment includes the FRTU and communication accessories.
17	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 3.3 Design Details (Page No.16)	The SPB shall be designed to operate at the rated voltage of 11 kV. It shall consist of one number of 630 Amp SF6 insulated bus bar chamber and vacuum interrupter.	The SPB shall be designed to operate at the rated voltage of 11 kV. It shall consist of one number of 630 Amp SF6 insulated bus bar chamber, the SF6 gas chamber shall be of Stainless steel 316L grade with a minimum thickness of 2.5mm and vacuum interrupter and Copper Busbar of Suitable size required for 630A shall be provided as per applicable IEC standard.

18	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause 10.1 Enclosures (Page No.30)	Constructed of stainless steel (316L) according to IEC 60529 with IP rating 67 or better. Alternatively, the SPB 's metal parts shall be made of high thickness high tensile steel which must be grit/shot blasted, thermally sprayed with Zinc alloy, phosphate, and subsequently painted with polyurethane based powder paint, the overall paint layer thickness including Zinc spraying shall be of the order of 120 microns.	Constructed of stainless steel (316L) according to IEC 60529 with IP rating 56 or better and can withstand external mechanical shocks not less than IK10 as per applicable IEC standards.. Alternatively, the SPB 's metal parts shall be made of high thickness high tensile steel which must be grit/shot blasted, thermally sprayed with Zinc alloy, phosphate, and subsequently painted with polyurethane based powder paint, the overall paint layer thickness including Zinc spraying shall be of the order of 120 microns.
19	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) 3.2 Parameter Requirements (Page No.15)	The SPB shall be capable of withstanding the specified currents without damage in accordance with IEC 62271-102 and IEC 62271-1 (Common Specifications for High-Voltage Switchgear and Control Gear Standards) and IS 3427 (AC Metal Enclosed Switchgear and Control Gear for Rated Voltages above 1 kV and up to and including 52 kV).	The SPB shall be capable of withstanding the specified currents without damage in accordance with IEC 62271-102 and IEC 62271-1 (Common Specifications for High-Voltage Switchgear and Control Gear Standards) and IS 3427 (AC Metal Enclosed Switchgear and Control Gear for Rated Voltages above 1 kV and up to and including 52 kV). The rated cable charging interrupting current shall be 25Amps as per IEC 62271-103.
20	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB) Clause: 2.5 Surge Voltage Suppression (Page No. 10)	The SPB equipment shall be designed to operate on input power containing voltage spikes. Equipment shall be protected against part failure or malfunction such as intermittent firing of triggering devices due to surge voltage spikes occurring randomly over the instantaneous supply voltage.	The SPB equipment shall be designed to operate on input power containing voltage spikes. Equipment shall be protected against part failure or malfunction such as intermittent firing of triggering devices due to surge voltage spikes occurring randomly over the instantaneous supply voltage. Dedicated Surge Protection Devices (SPDs) shall be provided to RS-485 meter-relay communication ports.
21	Section – 6(B) Technical Specifications for Single Panel Breaker (SPB): 2.7.4 Terminal	All individual status input, AC voltage input, and control output points shall be isolatable without the need to remove wiring by means of individual	All individual status input, AC voltage input, and control output points shall be isolatable without the need to remove wiring by means of individual terminal blocks of

	Blocks(Page NO. 12)	terminal blocks of the removable link type. In order to avoid open circuits on the secondary side of CTs, termination blocks with by-pass bridges shall be provided for all AC current inputs.	the removable link type. In order to avoid open circuits on the secondary side of CTs, termination blocks with by-pass bridges shall be provided for all AC current inputs. MFM and relay Communication RS-485 cable wirings shall be terminated on terminal blocks.

All other terms and conditions of Technical specification document of SPB remains unaltered

General Manager (Ele)

DAS, SG & TIC, BESCOM